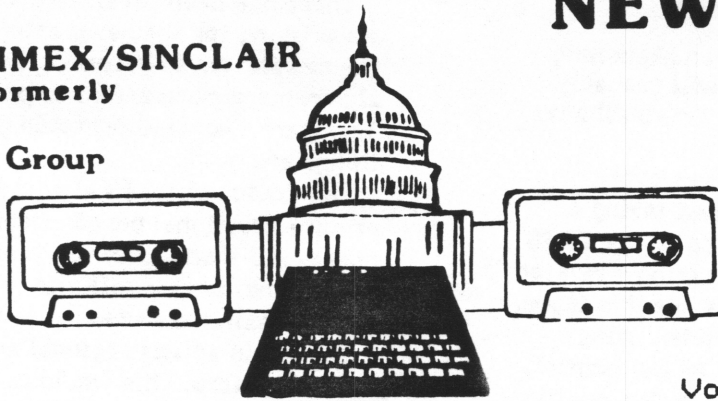


CATS

CAPITOL AREA TIMEX/SINCLAIR
USERS GROUP :Formerly
Prince George's
Timex/Sinclair User's Group

NEWSLETTER



Vol 1, No.8
November, 1983

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*****NEWS FROM THE BOSTON BLOW-OUT*****

Hi! from Beantown. Yours truly along with Linda Moran and Mattie Durholz attended the GALA BIRTHDAY CELEBRATION of the Sinclair Users' Group of the Boston Computer Society last week. I really wish you all could have been there to pick up the contagious excitement of Timex/Sinclair Machines, peripherals, software, Historical exhibits and Home-Brewed additions to our great machine. Timex and or Sinclair announced at a pre-show reception the new machines and peripherals that would be coming out shortly. The microdrive is for real. They showed the Sinclair version of the microdrive for the Spectrum and felt they could deliver a U.S. version for all three machines by January or February 1984. The long promised modem was shown with a firm delivery around the first of the year. The hard disc or cartridge for the 2068 were neat little packages. They loaded 100K in 4 sec. The T-dock for the 1500 will allow you to load cartridges as fast on the 1500 and 1000. The tape recorders were a very fine package. You can see them at our next meeting. They spoke of an 80 column printer compatible for the 2068 just after Jan. 1. And best of all, Timex will put out an EPROM to plug into the 2068 loading dock to convert the 2068 into a Spectrum so as to enable the Spectrum programs to run on the 2068. There is an awfull lot of Spectrum Software available. Dan Ross, of Timex, showed some of the future software from Timex such as high resolution graphics for the 2068. In addition, word processing for all three machines. (See WP notice in this issue. You can have WP now for the 1000 and 1500.) There were approximately thirty vendors carrying and showing peripherals for all the machines from about 200 manufacturers. The displays were super. See some of the photos from the show at our meeting. There were seminar/workshops that ran from 10 A.M. to 5:30 P.M. Some of the topics were; Timex in the classroom; The present and future plans for Timex/Sinclair; Business and home applications for the Timex; Using Timex for Biomedical work. Computer literacy seminar-An introduction to Basic; The outs and ins of your own cottage industry; Overview of Word Processors; VuCalc and the Organizer; Demo of Votum and the Hunter Board; program to play Scott Joplins, "Maple Leaf Rag" on the 2068; and last but not least our own Mattie on the Modum Communications Networks. (See her article this issue.) We also had visitors playing

FROM THE EDITOR

As usual, a lot of things have been happening in the last month. Also as usual, I will probably forget to tell you about half of them - you'll have to bear with me.

You have probably noticed that my wobbly typewriter is gone (actually, it is just taking a rest). WORD Processing has come to the CATS newsletter! A number of word processing - related programs have been included in this month's issue. This column, of course, is being written using WSII, customized for the ProWriter 80 Col printer. On its own, WSII will nearly duplicate this quality of type, driving the 2040 printer, with no hardware add-ons. With a full size keyboard, I am able to type at the same speed I would have on a Selectric. On a club level, we have two more programs for you. John Shaffer has sent in a BASIC text handler, that, judging by the letter he wrote with it, provides a useful way to get your thoughts out to the 2040 printer. At the end of his letter, he invites others to improve on his code: and, coincidentally, Mihaily Grell has just completed a Printer - driver program that generates lower case letters for the 2040 printer: that is also included.

MEETINGISM

This month's meeting will feature news of new Timex hardware, Steve Johnson speaking on Planning Before You Program, and a presentation on Azimuth is not a Science Fiction Writer. See you there!

In addition, Jules Gesang will have copies of the Wiley Press's Timex Sinclair 1000/1500 BASIC and Timex Sinclair 2068 Quick reference guides, for the first thirty people at the meeting.

VOLUNTEERISM

In contrast to the participation I've seen in submissions to the newsletter, participation in other areas has been lacking. As mentioned elsewhere, only four surveys were returned; I'm sending out another copy for one last try. Mike Cohen's library project has me beat; he's recieved SEVEN responses. Hey folks, come on!

LOOKING FORWARD

There has been persistent talk of accepting advertising for the newsletter. This would allow the newsletter to become self supporting. It would also require more effort to produce, at all stages. There are two ways we could go (aside from the way things are now).

1. We could solicit local advertising. This would require additional person-hours in knocking on doors, and tracking the current accounts. On the other hand, the overall size of the publication could remain the same.
2. We could solicit regional accounts, with long term contracts. This would reduce the billing effort, but would require increased size - which requires additional throughput of material. Either alternative involves more volunteers.

That's easy to say, but behind that are two other correlaries; the folks (YOU) have to show up, and we (US) have to work out some way to coordinate our efforts. Right now, CATS (and most other user's groups I've seen) operates on the Feudal system, with a veneer of democracy. The most involved people come forward, and TAKE CHARGE, while the rest are content to share the results, and grumble a little if something seems off. It has some benefits (after all, that's why we've got it); it's quick to set up, provides rewards for those that are persistent in coming forward, and is familiar (standard corporate structure). It has some serious weaknesses, as well; it is equally quick to dissolve, open to abuse by the "warlords" involved, and bypasses the knowledge and initiative of the rank and file.

Do you see where this harangue is leading? I'm one of the "warlords." I make the decisions as to what is included, when it is published, etc. I am in this position not just because I want POWER, but because I don't know how to smoothly involve a group in the production - it's easier just to do it myself. We need to figure out how to turn this around, to build a structure that doesn't hang on one person's efforts. It will be difficult: but if we don't, CATS will vanish, like so many before.

Mark Fisher

chess against the computers, donated by Softsync and Timex. One person beat the Timex program in eleven moves and the Softsync in eight moves. Don't have his name but he must be a Pro. We intend having a Chess Match with a Chess program with a voice at a future meeting. Also represented were the publishers and editors of Sync, Timex Sinclair User and Syntax magazines. I think the best display from the standpoint of originality and graphics were Reston Publishing and Compusa. I'll bring you more on the show at the meeting next week. We will discuss a little of what each vendor showed. Lastly; this writer had the good fortune of winning a door prize. It was a Memotext Word Processor donated by Sahid of Memotech. Thanks Sahid. Its a neat item. We'll try and review it next issue. In closing, I want to congratulate SUE MAHONEY Director of the Sinclair Users' Group of BCS for the grand job they did in planning and carrying out the tremendous undertaking and responsibility. It was sincerely a joy seeing all this TIMEX/SINCLAIR under one roof. WHEN AND WHERE DO WE HOLD THE NEXT ONE? It's not too early to start planning.

Jules Gesang

OCT. 5, 1983
JOHN M. SHAFFER
5746 CEDONIA AVE.
BALTIMORE, MD. 21206

CAPITOL AREA TIMEX-
SINCLAIR USERS GROUP
P.O. BOX 725
BLADENSBURG, MD. 20710

DEAR CO-USERS:

I WANT TO THANK YOU FOR THE COMPLIMENTARY COPY OF YOUR NEWSLETTER THAT I RECEIVED IN THE MAIL YESTERDAY.

I WAS VERY FAVORABLY IMPRESSED BY THE PROFESSIONALISM DISPLAYED IN SAME, PERHAPS THAT IS NOT A HIGH COMPLIMENT IF YOU HAPPEN TO BE EMPLOYED IN A RELATED PROFESSION, IF SO I MUST SAY THAT YOU DO IT QUITE WELL.

I AM ENCLOSING THE APPLICATION AND A CHECK FOR TEN (VERY HARD COME-BY DOLLARS). IN MY ESTIMATION IT'S A BARGAIN.

ANY SERVICE THAT I CAN RENDER TO THE GROUP SHALL HAVE TO BE "IN ABSENTIA", PERHAPS SOME OF THE PROGRAMMING THAT I HAVE DEVELOPED MAY BE OF INTEREST TO OTHERS OF THE GROUP, I WILL PASS IT ON.

APPENDED TO THIS LETTER IS THE LISTING FOR A COMPACT TYPING ROUTINE THAT I CHRISTENED WITH THE NAME **TEXTYPE**, NOT SOPHISTICATED, FOR SURE, BUT A HANDY LITTLE UTILITY WHEN USED WITH THE 2040 PRINTER.

IN GENERAL, IT GOES AS FOLLOWS:

EACH LINE, AS IT IS TYPED, IS MANUALLY ENTERED. (A#) IS THE REGISTER THAT ACCUMULATES EACH LINE, PRINTING IT TO SCREEN AND HOLDING IT THERE UNTIL SUCH TIME AS THE COMMAND TO LPRINT IS RECEIVED. **DON'T** LOAD THE SCREEN, IT LOCKS EVERYTHING UP AND CAN ONLY BE STARTED BY BREAKING OUT AND RESTARTING. **CUMP** TO THE PRINTER WHEN YOU GET TO LINE 20 OR 21.

TO LPRINT, SIMPLY TYPE (<) UPON FIRST OF LINE ENTRY. IF YOU SEE AN ERROR IN ANY OF THE SCREEN TEXT IT CAN BE CORRECTED BY INPUTTING ******:BANNER LINE AT TOP OF SCREEN. QUERIES "LINE NO.?" AT THIS POINT YOU COUNT DOWN FROM TOP (EXCLUDING BANNER) THEN ENTER THE LINE NUMBER SO DETERMINED. BANNER LINE THEN DECLARES "TYPE CORRECTED LINE, PRESS <ENTER>". YOU THEN GO BACK TO THE TEXT AND CONTINUE. THERE IS ONE MORE SMALL SURPRISE CONTAINED IN **TEXTYPE**. IT'S CALLED **CARBON**. AFTER EACH PRINTING FROM SCREEN, A QUERY AT THE TOP OF THE SCREEN ASKS: "COPIES?" "Y" BRINGS THE QUESTION "HOW MANY?". TYPE IN THE NUMBER AND SET BACK WHILE THE 2040 DOES IT. "N" RETURNS YOU TO THE CLEARED PAGE FOR MORE TEXT WRITING.

WELL, THAT'S IT, **TEXTYPE**, FOR BETTER OR WORSE IT IS USEFUL AND NOT TOO CUMBERSOME, PLUS, IT WAS A LOT OF FUN FORMATTING IT. PERHAPS SOME OTHERS WILL ENJOY IT, MAYBE EVEN IMPROVE IT. GOD BLESS YOU **SO** **IT** **...**

BEST REGARDS

John M. Shaffer
JOHN M. SHAFFER
NE: JACK SHAFFER

0/0

A# IS CLEARED AT EACH PRINTING.

```
"LUCK" JACK
1 REM TEXTYPE BY-J.M.SHAFFER
   9/16/83
4 LET C#=""
5 LET N=0
6 CLS
10 DIM A$(22,32)
15 PRINT AT 0,0;"TEXTYPE:LPRIN
16 CHANGE LINE += "
20 LET N=N+1
30 INPUT A$(N)
35 IF LEN A$(N) > 32 THEN GOTO 6
40 IF CODE A$(N)=221 THEN GOTO
100
42 IF CODE A$(N)=215 THEN GOTO
200
45 PRINT AT N,0;A$(N)
50 GOTO 20
100 LET N=N-1
102 FOR M=1 TO N
110 LPRINT A$(M)
115 GOSUB 400
120 NEXT M
123 PRINT AT 0,0;"DO YOU WANT E
XTRA COPIES? (Y/N) "
125 IF INKEY#="" THEN GOTO 125
126 IF INKEY#="Y" THEN GOTO 420
130 GOTO 5
200 LET N=N-1
205 PRINT AT 0,0;"?LINE NO. YOU
WISH TO CORRECT???"
210 INPUT 0
220 PRINT AT 0,0;"TYPE CORRECTE
C LINE PRESS ENTER."
230 INPUT B#
240 LET A$(0)=B#
250 PRINT AT 0,0;A$(0);AT 0,0;"
"
260 PRINT AT 0,0;"TEXTYPE:LPRIN
CHANGE LINE += "
290 GOTO 20
400 LET C#=C#+A$(M)
410 RETURN
420 PRINT AT 0,0;"HOW MANY COPI
ES DO YOU WANT?...."
425 INPUT X
430 FOR C=1 TO X
432 LPRINT
433 LPRINT
434 LPRINT
435 LPRINT
436 LPRINT
440 LPRINT C#
450 NEXT C
460 GOTO 15
9000 SAVE "TEXTYPE"
9010 GOTO 4
```

MASSIVE TURNOUT SWAMPS EDITOR

Well, the membership has spoken: the questionnaires that were published in last month's newsletter have been pouring in. Literally pairs of responses have swamped the data processing capacity of my pet turtle - he's still chewing on the first one, and there's three more awaiting his attentions.

Seriously, folks, I need to know what you want to see, both in the newsletter, and in the meetings. There has been a lot of response to John Conger's presentation - I would like to hear suggestions for others. I've learned my lesson; I'm not going to ask you to tell me what you are interested in - but don't get surprised if I get bored with guessing, and do something else (golf?).

I do not want to detract from the efforts of those that have contributed to this newsletter. Their contributions have been the lifeblood of the publication, and I am sure that they will continue.

RESPONSES

4 Q's returned.

Equipment: 4 T/S 1000's, 5 16K memories, 2 large Keyboards, 1 printer, 1 modem, 1 VIC 20.

Background: All Beginner 4 (!)

Here because: To learn Basic; 2: To learn M/C; 2: To meet others; 3: To see new stuff; 4: 2 Other (with useful notes; thank you)

What kind of club is wanted? Most helpful; 4: Most friendly; 2

Change the meetings? 1 No Change, 1 add Q&A time,

2 More Demos, etc. (so what hardware do you have

Change the Newsletter? 1 No Change, 1 More tutorials, 1 More reviews (so write them)

What will you do to help? 1 Nothing (honest, at least, and he did return a form) 1 help on

committees if called, 1 open, 1 help on newsletter
Serve on committees: 1 for inter-club comm.

That's it. If you want to stand up and be counted, send in a copy of the form, and I'll tabulate your response as well.

MF

THANKS FOR YOUR CONTRIBUTION:

Ned Beeler
John Conger
Hank Dickson
Maddi Durholz
S.E. Fellerman

VU-CALC CLASS

On Saturday, Oct 22, John Conger conducted a tutorial session covering the program Vu-Calc. He spoke to some 15 motivated listeners at the New Carrollton library. In an obviously well-prepared discourse, supplemented by the first draft of a manual he is in the process of developing, John performed what might be considered a miracle in leading us through the intricacies of an involved and baffling maze of detail and subtlety.

The three hour period proved insufficient to allow for a complete presentation; perhaps John could be prevailed upon to add another session--after all of us have had a chance to digest and apply all the material gathered in this first. For my part, I've finally learned what a spreadsheet is, and now have an understanding (with much more to learn) about Vu-Calc.

In view of the interest displayed by this group, I would like to suggest that similar sessions be conducted, covering some of the other complicated programs available for the Timex/Sinclair computers.

Thanks again for a job well done.

S.E. Fellerman

VU-CALC HANDBOOK

on the Timex spreadsheet program and its use, by CATS member John Conger, is available. It amounts to about 20 pages Xeroxed, with templates and exercises. It demonstrates various formula techniques that make the electronic spreadsheet a versatile and powerful tool, for business or finance. It substitutes for the inadequate documentation that comes with the cassette. As used in the Vu-Calc seminar of Oct 22, an updated and expanded version is \$5.00 postpaid. Send cash or check to

John Conger
4814 Grantham Ave.
Chevy Chase MD 20815
Phone 654-5751

Corrections to Vu-Calc handbook:

For those that bought the handbook at the seminar, enter the following corrections: P7, 7 lines from bottom; C-COLUMN should replace C-CALCULATE: P8, 4th line from top: Change C03 to C02 J.C.

Sarah Fisher
Jules Gesang
Mihaly Grell
John M. Shaffer
Lloyd Unsell
Rick White

Maryland Book Exchange

SUE MAHONEY: A LOVE OF COMPUTERS

Today she was in New York City, talking to vendors, lecturers and media representatives at a computer convention, recruiting people to participate and attend a computer show (the Timex Sinclair Celebration) she is organizing this Saturday at the Boston Park Plaza Hotel. Tomorrow, somewhere around seven o'clock, the pace will start again - the phone calls, the letter writing, perhaps a trip to Boston in the afternoon. It is hectic, heart-racing work, and for Waterbury's Sue Mahoney, a job based on a dream.

Her vision - to bring together people and products, to put the personal back into "personal computers," specifically, in this instance, the Timex Sinclair line. Saturday's convention, which she is organizing for the Boston Computer Society in celebration of the second anniversary of its Timex Sinclair user group, will couple "the manufacturer, third party vendors of supporting services and products (software, etc.), enthusiastic users and prospective buyers.

It is an idea she's kicked around for a while. She first started working on the project while employed by the Lewis Sinclair Corporation in 1981, but the project got scrapped. Earlier this year, while employed as manager of Technical Support for the Waterbury-based Timex Computer Corporation, she revived the project, writing a prospectus for her employer's analysis.

But before she was able to do much about it, she became a victim of one of Timex's recent layoffs.

"The day I was told I was laid off, was the day I told my boss and all the people above him that I was going on with the convention on my own. One of the reasons I decided to do the show is I got sick and tired of people saying, "What can you do with a personal computer?" I knew people had computers just sitting on the shelf and I wanted to draw these people in."

When she decided to do the show, Ms. Mahoney first approached Timex for seed money to get the ball rolling, but the company, she says, wasn't able to budget the show. She searched around for another backer, and finally, received a loan from Reston Publishing Company, a division of Prentice-Hall. "they apparently believed in the concept enough to give us the money to get us going." From then on, it was a point of "getting on the phone and keep calling all different companies to explain the concept."

And, come 6PM Saturday (Oct. 22, 1983), it will be all over. And Sue Mahoney will be out of a job. "I'm not sure how this will all unfold. The market is so volatile. Where am I going to fit in on this whole scene? My mission, since I started working in the computer field in 1979, has been to help



people understand computers better; but whatever happens, I know it will work out," she smiles.

condensed from The Waterbury Republican American, Oct. 18, 1983

MORE ON THE IMPROVED SCROLL FUNCTION

BY RICK WHITE

THE IMPROVED SCROLL FUNCTION, BY KEN BROWN, WORKS RATHER NICELY DOESN'T IT? YOU HAVEN'T TRIED IT YET? TAKE A LOOK AT THE MAY NEWSLETTER FOR FULL DETAILS.

THE PROGRAM USED TO LOAD THE MACHINE CODE IS REPEATED HERE:

```

1 REM 1234567890123456789012
10 LET K=0
20 FOR I=16514 TO 16514+21
30 INPUT J
40 POKE I,J
50 PRINT TAB K;J)
60 LET K=K+4
70 NEXT I

```

AND THE DATA YOU SHOULD ENTER (LEFT TO RIGHT ACROSS EACH ROW) WHEN RUNNING THE ABOVE PROGRAM TO ENTER THE MACHINE CODE:

```

42 12 64 35 64 90 1 33
0 0 1 214 0 237 178 1
0 21 205 245 6 201

```

THE ASSEMBLY LANGUAGE VERSION WHICH WAS PREVIOUSLY LISTED WAS IN ERROR, THIS IS THE CORRECT VERSION, WITH THE CORRECT HEX CODE:

HEX	ASSEMBLY
2A0C40	LD HL, (+16396)
2C	INC HL
54	LD D, H
5D	LD E, L
012100	LD BC, +33
09	ADD HL, BC
01D602	LD BC, +726
EDB0	LDIR
010015	LD BC, +5375
0DF508	CALL +2293
09	RET

TWO IMPORTANT LINES WERE OMITTED FROM THE ORIGINAL LISTING:

```
LD BC, +5375
CALL +2293
```

THE "CALL +2293" COMMAND JUMPS TO A ROUTINE IN THE ROM WHICH RESETS THE PRINT POSITION TO THE VALUES OF THE B AND C REGISTERS. THE B AND C REGISTERS ARE LOADED WITH THE VALUES OF THE 18TH AND 17TH BYTES OF THE MACHINE CODE; HENCE THE PRINT POSITION 21,0; AS IN THE BASIC SCROLL.

WITH THIS INFORMATION, DIFFERENT SCROLLS CAN BE CREATED, SUCH AS A HALF-SCREEN SCROLL (YOU MAY HAVE A USE FOR THIS SOMEDAY).

YOU CAN ALTER THE PRINT POSITION BY THESE POKES:

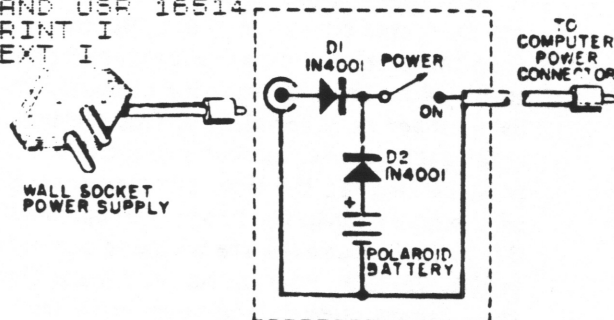
```
POKE 16530, COLUMN NUMBER
POKE 16531, LINE NUMBER
```

THEN CALL THE SCROLL ROUTINE, AS BEFORE, WITH:

```
RAND USR 16514
```

THIS ACCOMPLISHES THE SAME EFFECT AS THE BASIC COMMANDS "SCROLL" AND "PRINT AT", BUT THIS MAY GIVE YOU AN IDEA OF HOW TO INCORPORATE DIFFERENT SCROLLS INTO THE IMPROVED VERSION. THE FOLLOWING PROGRAM MAY HELP YOU TO EXPERIMENT WITH DIFFERENT PRINT POSITIONS. DELETE LINES 10 THRU 70, THEN ENTER THE EXTRA LINES, LEAVING LINE 1 INTACT.

```
1 REM E&RND777 5 CHR# GOS
UB LN PRINT TAN
10 PRINT AT 0,0;"LINE?"
20 INPUT I
30 POKE 16531,I
40 PRINT AT 0,0;"COLUMN?"
50 INPUT I
60 POKE 16530,I
70 FOR I=1 TO 100
80 RAND USR 16514
90 PRINT I
100 NEXT I
```



A "TRULY PORTABLE" SINCLAIR/TIMEX by Les Solomon, from August '83 Computers & Electronics

Wouldn't it be nice to be able to enter a program in your Sinclair/Timex computer and, when you remove the AC power, have the program remain in memory?

Even (if) you are not interested in portability, the circuit to be discussed adds one other very useful feature - it provides an un-interruptable power supply that maintains the computer's data integrity if it is connected to the wall socket and commercial power fails.

The circuit (Fig.1) is a basic diode switcher. When the power supply is delivering a voltage higher than that of the battery, silicon diode D1 is forward-biased (acts like a closed switch), while silicon diode D2 is reverse-biased (acts like an open switch). This effectively isolates the battery from the system. If the line-operated supply is removed - D2 becomes forward-biased, D1 becomes reverse-biased, and the battery supplies power to the computer.

Now, which battery to use? A conventional 9V transistor battery will run a minimum computer, but it will soon run down to 7V - a waste of power. (The 6V battery which comes in a Polaroid film pack works quite well - and it is free.)

The two diodes, the battery, and the POWER switch were fitted together and covered with electrical tape. A connector was interfaced to a plug at the end of the wall-supply, and a cable terminated with a plug connects the package with the computer's power input receptacle.

The package can be mounted to the computer, with the output cable plugged into the computer. When the wall supply is plugged into the package and the POWER switch turned on, the system works as normal. When the supply is not operating, the battery runs the system. When the battery runs down, slit the tape and wire in a new battery.

ANATOMY of a PROGRAM LINE

Program listings on the T/S computer are available on command. With either LIST or LLIST, the program in the machine is displayed for you, to study or change. But not everything in the machine's program file is displayed!

There are three elements of the file that are censored from the LISTings you see; I'll get to them in a moment. But ignorance is bliss, you say. To an extent, you're right. For most programming chores, understanding the structure of the T/S's program file is unnecessary. There are times, however, when you may want to work with the program file itself - line renumbering, or when trying to save space for example - and these times, knowledge of the structure is important.

Computer Structure

This paper is a tool for holding information. The shapes written on it (letters) mean different things as they are combined (words, and sentences). The computer is also a tool for holding information; but it is built in a different way. There are two main differences: 1. it holds binary numbers only, and 2. it is linear, like a string of beads, rather than two dimensional, as this paper is. For the convenience of the human users, both of these attributes have been "covered up." You can communicate with the machine using letters and decimal numbers, and receive its replies in the same way, but the machine is doing a lot of extra work to accommodate you. When we look at the structure of the computer, though, we must keep those differences in mind.

Mechanics

The computer stores numbers in a long string. Each number, in reality, is a collection of 32 transistors, formed into eight switches, or bits. These eight bits together are called a byte. As it happens, eight switches can be arranged in 256 different ways, from 00000000, 00000001, 00000010, ... to 11111111. We can think of each arrangement as a number, between 0 and 255. Each of these eight bit numbers has a fixed position in the string of numbers; these positions are called addresses. Not all addresses have switches presently attached - it's a little like a new Levittown, with empty streets stretching off into the distance. In the basic T/S 1000, only the addresses from 0 to 8192, and from 16384 to 18432 are used, while the machine could work with addresses up to 65536! The sample program we will look at today will be stored between 16509 and 16607.

Here's the program:

```
10 REM SAMPLE PROGRAM. NO. 1
20 FOR N=16509 TO 16606
30 SCROLL
40 LPRINT N; " "; PEEK N; TAB 10;
CHR$ PEEK N
50 NEXT N
```

You may want to change LPRINT to PRINT after you have RUN it once. Otherwise type it in exactly as written - the success of your future pokes depends on it. This program uses two features of BASIC to help us examine the machine's memory: PEEK and CHR\$. PEEK, followed by an address, will give us the decimal value of the number at that address. There is a companion command to PEEK, that lets us change the value stored in RAM; that is POKE. We'll use it in this tutorial as well. The machine can interpret that number in several ways (as text, as a binary number, or as machine code) and we can use CHR\$ to command the machine to translate the number into text. &

Tokens

Run the program. "Wait!" you say, "each address is supposed to hold one number, and some seem to hold whole words." What you're seeing are tokens. When the machine translates its memory into text, some numbers are assigned whole words, rather than individual characters. You can see a list of all the tokens in the character list in the back of your User's Manual.

The Powerful 118

The next thing you notice is that the nice, neat program lines are gone; the numbers run along without an apparent break. There are two kinds of breaks there though, one of which you haven't even known about. 118 is the end of line marker; note how each line of the program has a 118 to conclude it (each line of the screen display has one also, but that's a subject for another month). When the LIST routine is drawing the program to the screen, it uses the 118 markers to signal the end of a line. We can have some fun with that - enter POKE 16520,118 and ENTER. The LIST routine now thinks that the REM is in two parts! The program will still run; the machine uses a different method of keeping things straight as it RUNs. Now try POKE 16521,118 and ENTER. List the program - where did it go? It's still there; try RUN to prove it. The LIST routine interprets two 118's together as the end of the program file. If you want to see the rest of the program again, POKE 16520,0 and 16521,0.

The Silent 126

The machine has another flag hidden in the listing. RUN the program again, and watch the LISTing of line 20 (addresses 16536 to 16566). The number 16509 appears, starting at 16543. There are the character codes for 1, 6, 5, 0, and 9 - but then there are six bytes of garbage before you get to the "to". The 126 tells the computer that a five byte binary number follows. This number is inserted after each decimal number you include in your program line, as the line is copied from the bottom of the screen into the program area. When you press EDIT, these numbers are stripped out. Try POKE 16520,126. LIST now thinks that the letters "PROGR" are a binary number, and hides them from you.

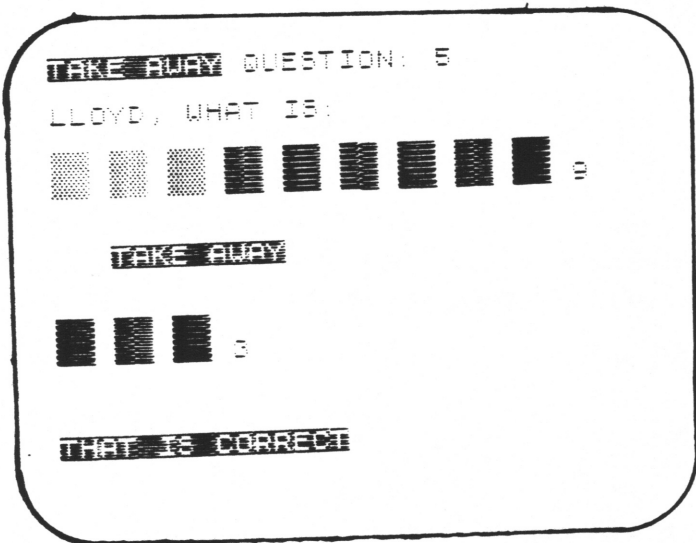
"PRE-SCHOOL MATH"
BY LLOYD UNSELL

DO YOU HAVE A PRE-SCHOOLER,
KINDERGARTNER OR FIRST GRADER
THAT IS HAVING PROBLEMS WITH
SIMPLE ADDITION AND SUBTRACTION?

WE ALL KNOW THAT WHAT THEY NEED
IS PRACTICE, PRACTICE, PRACTICE-
AND THIS PROGRAM SHOULD GIVE IT
TO THEM. IT SPEAKS IN THE TERMS
THEY WILL HAVE IN SCHOOL-"PLUS",
AND "TAKE-AWAY". IN ADDITION,
IT GRAPHICALLY SHOWS SQUARES
WHICH MAY BE COUNTED TO GET THE
ANSWER. IN SUBTRACTION, IT
SHOWS THE SQUARES "REMOVED"
(GRAY RATHER THAN BLACK), SO
THE ANSWER IS MORE OBVIOUS FOR
YOUNG MINDS. MY FIRST GRADER
LOVES IT AND I THINK YOUR KIDS
WILL, TOO.

TYPE THE PROGRAM AS LISTED AND
ENTER "GOTO 100" TO SAVE-THE
PROGRAM WILL RUN AUTOMATICALLY
WHEN LOADED. A CORRECT ANSWER
IS REWARDED WITH A FLASHING
"THAT IS CORRECT" AND WRONG
ANSWER MAY BE CORRECTED. ALL
ANSWERS ARE BETWEEN 1 AND 9,
HOWEVER, LINE 31 MAY BE DELETED
TO REQUIRE ADDITION ANSWERS FROM
1 TO 18. TO LOAD, ENTER:
LOAD "PSMATH"

HOPE YOU (AND YOU KIDS) ENJOY IT
SAMPLE SCREEN FORMAT:



PROGRAM TAKES 1216 BYTES.....

```

1 REM "PSMATH"-BY L.UNSELL
2 LET Z=800 PI
3 LET Y=NOT Z
4 PRINT "NAME?"
5 INPUT N$
6 PRINT "ADD (A), TAKE-AWAY (T)
7 PRINT "X-UP (M)"
7 INPUT A$

```

```

10 IF A$="A" THEN LET E=Y
11 IF A$="T" THEN LET E=Z
12 GOSUB VAL "100"
13 LET X=Y
14 FOR Q=Z TO VAL "10"
15   Q1$
16   IF A$="M" THEN LET E=INT (R
ND+(Z+N))
17   IF E=Y THEN PRINT "ADD "
18   IF E=Z THEN PRINT "TAKE AW
19
20 PRINT "QUESTION: ";Q
21 LET A=VAL "INT (RND*9)+Z"
22 LET B=VAL "INT (RND*9)+Z"
23 IF E=Y AND A+B>VAL "9" THEN
GOTO VAL "20"
24 IF E=Z AND B+Z>A THEN GOTO
VAL "20"
25 PRINT AT Z+Z,Y;N$);, WHAT I
S:
26 FOR D=Y TO A-Z
27 IF E=Y THEN PRINT AT PI+Z,D
*INT PI;";AT PI+Z+Z,D*INT PI;
28
29 IF E=Z AND D+Z<=B THEN PRIN
T AT PI+Z,D*INT PI;";AT PI+Z+
Z,D*INT PI;";
30 IF E=Z AND D+Z>B THEN PRINT
AT PI+Z,D*INT PI;";AT PI+Z+Z
,D*INT PI;";
31 NEXT D
32 PRINT AT 5,(A-Z)*INT PI+INT
PI;A
33 IF E=Y THEN PRINT AT 8,INT
PI;"PLUS"
34 IF E=Z THEN PRINT AT 8,INT
PI;"TAKE AWAY"
35 FOR D=Y TO B-Z
36 PRINT AT 11,D*INT PI;";A
T 11,
D*INT PI;";
37 NEXT D
38 PRINT AT 12,(B-Z)*INT PI+IN
T
PI;B
39 INPUT C
40 PRINT AT 15,Y);,
41
42 IF E=Y AND C<A+B THEN GOTO
VAL "60"
43 IF E=Z AND C<A-B THEN GOTO
VAL "60"
44 GOTO VAL "60"
45 PRINT AT 16,Y);, THAT IS WR
ONG. TRY AGAIN.....
46 LET X=X+Z
47 GOTO VAL "50"
48 FOR I=Z TO LEN STR$ PI
49 PRINT AT 16,Y);, THAT IS CORR
ECT"
50 PRINT AT 16,Y);, THAT IS CORR
ECT"
51 NEXT I
52 GOSUB 100
53 NEXT Q
54 GOTO VAL "100"
55 FOR I=Z TO CODE "C"
56 NEXT I
57 RETURN
58 GOS
59 PRINT "YOU GOT ";Q-X);, RIGH
T ON THE FIRST TRY."
60 PRINT "TRY AGAIN?(Y/N)"
61 INPUT Q$
62 IF Q$="N" THEN STOP
63 IF Q$="Y" THEN GOTO VAL "6"
64 HAVE "DEMAT"
65 RUN

```

TELECOMMUNICATING WITH YOUR TIMEX
by Maddi Durholz

By adding a modem and RS232 serial interface to a TS1000 or TS1500 (later the TS2068) anyone can easily, via telephone, "talk with" or retrieve data from nationwide information data banks (CompuServe, The Source, Dow Jones), online "libraries" (Knowledge Index, After Dark), national and local free bulletin boards (several in the D.C. area), electronic mail, banking, shopping, bartering and conference services, and special interest groups (ham radio, pets, music, aircraft, soap operas, computers - you name it). Charges for some are based upon the low evening/night rates of special telephone networks (CIS, Telenet, Tymnet, Uninet) and non-prime time usage of the data systems. Others are toll free to local bulletin boards and Timex and non-Timex computers.

I feel my Byte-Back MD-2 modem with its built-in RS232 interface is inexpensive, easy to use and reliable. (All problems with the MD-1 have been corrected.) Completely assembled and tested for \$150, or in kit form for about \$80 less, and not much larger than a rumpack, it is similarly attached and may be used with or without 16K or 64K of memory. Instructions for adding a TS2040 printer or 80 column printer (serial type needs modifications - directions supplied), and use of the cassette terminal software are supplied and clear. Byte-Back's evening customer support is superb.

My TS1000 becomes a "dumb" or "smart" terminal depending on which of the two furnished software programs is loaded into memory. The "Z2" program allows for simple video interaction with the dialed up system but can also print output by copying the screen or by semi-simultaneous printing of incoming data. The "Z16" smart program does the same but also allows incoming data (text, programs or variables) not only to be saved (60 screens with 64K) or downloaded to memory but sending yours (uploading) to remote computer storage, to other Timex's or even to non-Timex computers. I understand that the Memotech and Timex modems may not offer these "smart" features. Right now I access only CompuServe and Knowledge Index, and dial the local number for the appropriate network, flipping the modem switch at the tone and hang up. The network prompts me quickly until I enter my account number and password and am logged on.

CompuServe is really two systems in one. The first is a personal computing area (Mic-

ronet) which, among others, provides each customer with their own 128K for storing and retrieving their's or someone else's programs. Byte-Back's "smart" software even allows an exit to BASIC to examine, modify and then reload to CompuServe without logging off! Other features include electronic mail, wordprocessing, bulletin boards, user groups, conferencing, computer CB simulation, free software and games. The second, called a display area (Videotex) offers, for example, an online encyclopedia, business, weather (see Fig. 1) and sports news, electronic magazines and newspapers (like Washington Post), travel planning, buying, bartering, personal financial and investment planning, program language tutorials, humor, hardware and software reviews, and the wire services. Password and manual may be available for as little as \$19.95. The all-inclusive hourly rate is only \$6.00.

Knowledge Index (KI) could be described as a "library" no further away than your Timex and which is often faster and more precise to use than a library. About 20 resources (data bases) are available on KI which cover all fields of knowledge: for example, law, medicine and pharmaceuticals, business, management, psychology, agriculture, engineering, computers and electronics. Newspaper and magazine coverage, government publications, Standard & Poor's data and Bond information are offered. KI outputs may be referenced to books or magazines, reviews, or actual data. Detailed abstracts may be ordered (see Figs. 2 & 3) or last paragraphs of abstracts may be selected (see Fig. 4). The abstracts are often sufficient but entire articles may be ordered online. Both CompuServe and KI allow Timex parameters, e.g., 81 character screen width, to be treated as well as flexible displays and online hard copy printing. I recommend accessing KI with Telenet as it allows for single spaced printed output. Since KI (and After Dark) are professionally derived data systems, they cost more than CompuServe to access (\$15-\$24 an hour) but are worth it when you have a need since the average search takes 5 to 10 minutes.

If you'd like more information on telecommunications or what services and systems are available, I urge you to purchase The Complete Handbook of Personal Computer Communications by Alfred Glosbrenner, St. Martin's Press, 1985, \$24.95. It is readable, comprehensive, well organized, detailed and has not failed me yet!

TELECOMMUNICATING WITH YOUR TIMEX (CONT.)

Figure 1.

```

COMPUSERVE          PAGE HOM-10

NEWS/WEATHER/SPORTS

NEWS SERVICES
1 THE WASHINGTON POST ($)
2 ST. LOUIS POST-DISPATCH
3 AP VIEWDATA WIRE

4 NOAA WEATHER WIRE
5 OFFICIAL PGA TOUR GUIDE
6 HOLLYWOOD HOTLINE ($)
8 INDICATES SURCHARGED SERVICE

LAST MENU PAGE, KEY DIGIT
OR M FOR PREVIOUS MENU.
    
```

```

#
# OTHER          PAGE WX-3
# STATE FORECASTS
# EXTENDED FORECASTS
# FORECAST EXPLANATION
# PROBABILITY OF PRECIP.
# MARINE FORECASTS
# SPORTS FORECASTS
# WEATHER WARNINGS
# ADJUTANT WEATHER MENU
# ACTION: 1
# FCSTS
    
```

ENTER IDENTIFIERS
OR <H> FOR HELP

ID: H
STATE FORECASTS (FP) GIVE THE
24 - 48 HOUR OUTLOOK FOR EACH
CITY IN ALPHABETICAL ORDER.
REPORTS ARE FILED AND RETRIEVABLE BY
MAJOR CITY CODE, OR YOU MAY
USE 2-LETTER STATE ABBREVIATIONS

(AZ, DC, OH, ...), TYPE "LIST"
AT THE "ID:" PROMPT TO SEE ALL
FP REPORTING LOCATIONS.

KEY <ENTER> FOR NEXT PAGE: LIST
003 ABO ALE ARB ATL BHM BIS BOI
BOS BUF CAE CHI CLE CRW CYS DEN
DSM DFW FTW GTF HNL IND JAN LAX
LBB LIT MEM MIA MKE MSP NEW NYC
OKC OMA PDX PHL PHX PIT PUM RDU

BIC RNO SAT SDF SEA SFO SLC STL
TOP WE:
ID: ML

WBC 010800

DC AND VICINITY FORECAST
NATIONAL WEATHER SERVICE WASHIN
GTON DC
4 30 AM EDT SAT OCT 1 1983

DC01-DC AND VICINITY
4 30 AM EDT SAT OCT 1 1983

.TODAY...VARIABLE CLOUDINESS: V1
TH A 30 PERCENT CHANCE OF
A SHOWER. HIGHS AROUND 75.
.TONIGHT...PARTLY CLOUDY. LOWS
AROUND 55 IN THE SUBURBS
TO AROUND 60 DOWNTOWN.
.SUNDAY...PARTLY SUNNY AND A LI

TITLE WARMER. HIGHS AROUND
60.

Figure 2.

```

TIMEX SHOWS COLOR COMPUTE-
WITH 48K RAM FOR UNDER $200
NAME: SCOTT
INFOWORLD, JAN 31 1983, P. 15
NE P16-18, 2 PAGES 1557
0189-8649
LANGUAGES: ENGLISH
DOCUMENT TYPE: ARTICLE
GEOGRAPHIC LOCATION: UNITED
STATES
REPORTS THAT TIMEX HAS
INTRODUCED ITS NEW COLOR
COMPUTER, WHICH HAS 48K RAM.
THIS TIMEX/SINCLAIR 2000 (#189,11
) IS A MODIFIED VERSION OF
SINCLAIR'S APPROACH SPECTRUM
COMPUTER WHICH HAS BEEN SOLD
IN THE U.S. AND CANADA.
DESCRIPTORS: *PRODUCT ANNOU-
NCEMENT; *MICROCOMPUTER SYSTEM;
*TIMEX SINCLAIR 2000
IDENTIFIERS: TIMEX SINCLAIR
2040, TIMEX COMPUTER CORP.
    
```

Figure 3.

```

GRAPHICS 6 PACK
SOFTSYND INC
14 E 34TH STREET
NEW YORK, NY 10016
(212) 688-2080
TERMS: MO, CHECK, MC, VISA
40 DEALER DISCOUNT
TIMEX-SINCLAIR
TS-1000/CASSETTE/1K/14.95$/14.-
00$
BASIC/CASSETTE/1K/14.95$ 14.-
00$
COUNTRY OF CURRENCY: USA
LANGUAGE: BASIC SOURCE CODE
AVAILABLE: NO
INTEGRATED PACKAGING: NO
UPDATES: NO
DATE OF RELEASE: 821000
WARRANTY: YES
THESE SIX GAMES FIT INTO A 1K
SINCLAIR ZX81 OR A 2K TIMEX
1000. THE GAMES ARE TITLY
INVADERS, DEFEND, ALIEN
INVADER, WINDING STAIRWAY,
ASTRO DODGER AND CROSS THE
ROAD. COMPLETE INSTRUCTIONS ON
HOW TO UPGRADE AND MODIFY THE
GAMES ARE INCLUDED.
438 PERSONAL/GAMES
    
```

Figure 4.

```

CHECKBOOK, INCOME TAX, AND
BUDGET ORGANIZER
ZX-RANDING LTD
PO BOX 85
NEWTON, NC 28655
TIMEX-SINCLAIR
ZX-81/CASSETTE/15.00$/15.00$
COUNTRY OF CURRENCY: USA
SOURCE CODE AVAILABLE: NO
INTEGRATED PACKAGING: NO
UPDATES: NO
WARRANTY: YES
    
```

CATS Membership survey

Equipment owned: quantity T/S 1000 ___ 16k ___ 32k ___ 64k ___ Add on ROM board ___
 2040 Printer ___ Other Printer ___ Modem ___ Large keyboard ___
 Joystick ___ Disk & controller ___

Other _____
 Tapes; homegrown ___ from magazines ___ commercial ___

Background: Beginner 1 (where do all these plugs go ?) _____
 Beginner 2 (how do you code a FOR-NEXT loop ?) _____
 Beginner 3 (my programs work, but no one can read them) _____
 Beginner 4 (what's a LDIR command ?) _____
 Beginner 5 (why can't this machine have a decent i/o structure like my VAX ?) _____

Why are you with us ? (more than one answer is OK) To learn BASIC ___ To learn machine code ___ To meet others that are working on this machine ___ To learn about new equipment ___ To learn about new programs ___
 To learn how to use commercial programs ___
 Other _____

What kind of club do you want ? The biggest on the East Coast ___
 The most helpful on the East Coast ___
 The friendliest on the East Coast ___
 Other _____

How would you change the meetings They're perfect ___ More product demo's ___ More program demo's ___ More info for beginners ___ More info for advanced ___ Separate small interest groups (sig's) ___
 More time to talk to those around me ___ More tutorials ___
 Other _____

How would you change the newsletter ? It's perfect ___ More general articles ___ More program reviews ___ More book reviews ___ More hardware reviews ___
 More tutorials ___ News from other clubs ___ Advertising ___
 Program mods ___
 Other _____

WHAT WILL YOU DO TO ACHIEVE THE ABOVE ? Nothing ___ Help on committees if called ___ Write for the newsletter ___ Volunteer for committees ___ Start committees ___
 Coordinate committees ___
 Other _____

Potential committees: (and existing ones) BASIC Education ___ M/C Education ___ Newsletter ___
 Library ___ Inter-club communication ___ News. Advertising ___
 Publicity ___ MEETING PLANNING ___ Membership ___ Contests ___

.....
 SKILL LEVEL Name & Address, if you would like to help.

Yours 0..1..2..3..4..5..6..7..8..9 _____
 Meetings 0..1..2..3..4..5..6..7..8..9 _____
 Newsletter 0..1..2..3..4..5..6..7..8..9 _____

YOU CAN BELIEVE YOUR EYES!

WORD PROCESSING FOR THE TIMEX / SINCLAIR COMPUTER

UPPER & lower Case - with

NO HARDWARE ADD-ONS!

WORD SINC II+

WORD SINC II+ is a smooth, full feature word processor that will transform your computer (ZX81, T/S 1000, or T/S1500) and printer (ZX or Timex 2040) into a real word processing system.

WORD SINC II+ OFFERS:

42 characters per line on the standard Timex printer.

FULL character set, with all punctuation (see chart).

Smooth, full speed keyboard action, with auto repeat (with controllable speed).

High speed, machine code - controlled printing.

Full Right Justification.

Selectable page numbering (with controllable page length).

Search, Replace, Move, Insert, and Delete commands.

Selectable EXPANDED PRINT.

16K to start, holds 8000 characters of text (equal to 6 double spaced pages); easily expandable to 48K memory.

1234567890ABCDEFGHIJKLMNPOQRSTUVWXYZab
cdefghijklmnopqrstuvwxyz\$()"-+=;?/*<>
,.!'@:~!+!+ | [] \ ^ _ ` ~ #

Sample screen:

```
WORD SINC II+ IS A SMOOTH, FULL
FEATURE WORD PROCESSOR THAT WILL
TRANSFORM YOUR COMPUTER (ZX81,
T/S 1000, OR T/S1500) AND PRINTE
R (ZX OR TIMEX 2040) INTO A REAL
WORD PROCESSING SYSTEM. WORD SINC
II+ OFFERS: 42 CHARACTE
RS PER LINE ON THE STANDARD TIME
X PRINTER. FULL CHARACTER SET,
WITH ALL PUNCTUATION (SEE CHART).
SMOOTH, FULL SPEED KEYBOARD AC
TION, WITH AUTO REPEAT (WITH CO
NTROLLABLE SPEED).
```

SPECIAL CHARACTERS (SHIFTED)

1	2	3	4	5	6	7	8
!	~	+	!	←	↓	↑	→
Q	W	E	F	T	Y		
		[]	%	\		
A	S	D	F	G	H		
@		_	π	&	#		

To order WORD SINC II+ fill out coupon below, and enclose your check or money order (no cash please).

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CITY _____ STATE _____ ZIP _____

SALES TAX (MD.) _____.

TELEPHONE DAY: _____ EVE. _____

TOTAL ENCLOSED \$ _____.

Capitol Area Times/Sinclair Users' Group
 P.O. Box 725
 Bladensburg, MD 20710

Name _____
 Address _____ ZIP _____
 Phone Home _____ Office _____
 Memberships - \$10.00 (family/individual); make checks payable to C.A.T.
 If family membership, please list family members participating:

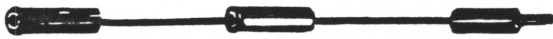
 Occupation _____
 Ham Radio call sign _____
 Equipment
 ZX 80 _____ disk size _____
 EA 80 _____ full keyboard _____
 ZK 81 _____ Printer _____
 TS 1000 _____ type _____
 TS 2000 _____ other interface _____
 Special interest use for computer: ie, games, ham radio interface,
 business, other, etc. _____
 Languages: Basic _____ Other _____
 Machine _____
 No. of years computer experience _____
 What committees would you like to serve on? _____
 Comments: _____



USER-FRIENDLY COMPUTER.

***** NEW PRODUCTS *****

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End overheating problems with this small power supply-computer interface unit. COMPCOOLER makes your computer run cool by reducing the voltage applied to your computer 9V DC jack. No hardware changes or computer modifications are required. Simply plugs between your computer and your power supply. For up to 700 ma. current requirements--adequate for your TS1000/15000 or ZX81, plus your TS1015 or Sinclair 16K RAM PAC, plus your TS2040 printer. (Not for use with the Sinclair ZX printer!)

\$7.95 including postage

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RD 1 Box 539-T, Centre Hall, PA 16828
 814-364-1325 MasterCard/Visa 10am-8pm. Check/MO

SPEECH RECOGNITION SYSTEM



Train your computer to obey your voice commands! With this experimental package, up to 8 words may be programmed for recognition. Works like a verbal INKEY\$ function. No hardware changes or computer modifications are required. The battery powered SRS unit simply plugs into your computer EAR jack. Package consists of a) hand-held hardware unit in a black plastic case b) cassette tape with both demonstration and utility programs c) documentation. Assembled \$34.95, KIT \$29.95 post paid Batteries not included.

ready NOV 15, 1983

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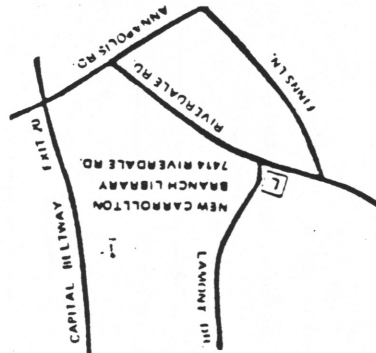
RD 1 Box 539-T, Centre Hall, PA 16828
 814-364-1325 MasterCard/Visa 10am-8pm. Check/MO
 FREE information and list of utilities on request.

MATERIAL

DATED

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECEIVE
CATS = \$10 per year, per family.

Next CATS Meeting ** 2PM *****
Saturday, November 12, 1983
New Carrollton Public Library
7114 Riverdale Rd., New Carrollton, MD



CATS Newsletter
P.O. Box 725
Bladensburg, MD 20710

BULK RATE
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The mailing address of the Capitol Area Timex/Sinclair User's Group is:

Capitol Area Timex/Sinclair User's Group
P.O. Box 725
Bladensburg, MD 20710

CATS is a non-profit special interest organization dedicated to serving the interests of those who own, use, or are interested in learning more about the Timex/Sinclair family of personal computers.

The official contact person for CATS is Jim Wallace: (301) 699-8712

Meetings are held on the second Saturday of each month at 2 p.m. in the large meeting room of the New Carrollton Branch Public Library.

Submissions for this publication are eagerly solicited. Publication of material does not transfer rights from the author; in fact, it may establish priority.

Submissions may be articles on applications, programming techniques, hardware, reviews, or anything else you can imagine. Letters and Unclassified ads (free to members, \$1.00 otherwise) will be printed. Pertinent articles from other publications will also be considered.

I would prefer material to be typed, single spaced, in 3 1/4" columns--but don't break your back--the Xerox dosen't really care.

Ham Radio Network Information

QZX Net ----- Wednesdays, 9p.m. local time; 14.345 MHz
NV4F NCS
Eastern Regional Sinclair Net -- Sundays, 1600 Z; 7.245 MHz
KQ2F NCS